



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of)
)
PETERS et al.)
) Art Unit 1751
Application Number: 10/820,695)
)
Filed: April 9, 2004) Examiner Gregory R. Delcotto
)
For: PROCESS AND APPARATUS FOR)
REMOVING RESIDUES FROM THE)
MICROSTRUCTURE AN OBJECT)
)
Attorney Docket No. AIRP.0001)

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION OF INVENTOR UNDER 37 C.F.R. §1.132

Sir:

I, Matthew Egbe, am a co-inventor of the invention disclosed and claimed in the above identified application, and hereby declare as follows:

I have reviewed the above-referenced patent application and the claims of record, and have carefully considered the Examiner's rejections under 35 U.S.C. §103(a) based on obviousness over Mullee (U.S. Pat. No. 6,306,564) in view of Vaartstra (U.S. Pat. No. 6,242,165) and Skee et al. (U.S. Pat. No. 5,989,353); Mullee in view of Vaarstra, Skee, and Xu et al. (U.S. Pub. No. 2003/0125225) and further in view of McCullough et al. (U.S. Pat. No. 5,976,264); and Mullee in view of Vaarstra and Skee and further in view of McCullough or WO 01/33613. I respectfully disagree with the Examiner's rejections.

As a co-inventor, it is my understanding that the claimed invention provides a composition for removing residues from the microstructure of an object comprising: carbon dioxide; an additive for removing the residues comprising a fluoride having a formula $\text{NR}_1\text{R}_2\text{R}_3\text{R}_4\text{F}$, where each of R_1 , R_2 , R_3 , and R_4 is an alkyl group, and a basic compound including a quaternary ammonium hydroxide; and a co-solvent for dissolving said additive in said CO_2 at a pressurized fluid condition, wherein at least said carbon dioxide is in a supercritical state so as to maintain the composition comprising said carbon dioxide, said

additive and said co-solvent as a single composition, wherein weights percent of said carbon dioxide, said additive and said co-solvent are such that the composition comprising said carbon dioxide, said additive and said co-solvent effectively penetrates residues on the microstructure, and wherein the fluoride is selected from tetramethylammoniumfluoride, tetraethylammonium-fluoride, tetrabutyl-ammoniumfluoride, tetrapropylammoniumfluoride, choline fluoride, and mixtures thereof.

In Experiment 4 described on pages 10, line 5 – page 12, line 1 of the specification, ammonium fluoride was not dissolved in the co-solvent ethanol because the additive did not dissolve or was not dispersed homogeneously in CO₂ and had phase separation under supercritical CO₂ conditions. Instead, Additive G was dissolved in a combination of co-solvents, namely, deionized water, acetic acid, and ammonium acetate.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statement were made with the knowledge that willful false statements and the like so made are punishable by fine, or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-captioned application and any patent to issue thereon.

[0001] Respectfully submitted this 21 day of July, 2008

